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INTERMEDIATE PLANNING STUDIES

GOLDSBORO, NORTH CAROLINA

ANALYSIS OF EXISTING LAND USE

**LOCATION STANDARDS AND FUTURE SPACE
REQUIREMENTS FOR MAJOR LAND USES**

ANALYSIS OF EXISTING LAND USE

GOLDSBORO, NORTH CAROLINA

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Introduction

Land is the basic commodity of a city. How it is used determines the desirability of the city as a place to learn, to work, to play and to rest. If goals are to be set concerning future use of land, it is first necessary to know how land is presently being used.

The existing land use pattern is mapped as an aid in studying the inter-relationships of the various types of development. An analysis of this pattern is not only important as an indication of how efficiently the land is now used, but it also gives an insight into the best future arrangement of land use.

During the past year, a survey of land uses in Goldsboro was conducted and compiled. This is a report on that survey. As such, it becomes a tool for the development of the land use plan and a basis for forming public policy with regard to the use of land.

The influence of the city extends beyond the city limits. Housing, business and industry which are functional parts of the city appear in outlying areas. Thus, when planning the city, the entire area must be considered. This area, called the planning area, has been made the subject of this report.

Often, during the development of a land use plan, detailed statistics of smaller areas must be referred to. These smaller areas are called planning districts. Their boundaries are selected among major breaks of land use and generally follow physical barriers such as thoroughfares, railroads and watercourses. The planning area and planning districts are shown on the map entitled "Planning Districts."

Land is the basic necessity of a city. How it is used determines the character of the city as a place to live, to work, to play and to rest. It is also the basis for the city's future. It is first necessary to know how land is presently being used.

The existing land use pattern is mapped as an aid in studying the inter-relationships of the various types of development.

Analysis of this pattern is not only important as an indication of the existing land use, but it also gives an insight into the best future arrangement of land use.

During the past year, a survey of land use in Goldsboro and surrounding areas has been completed. This survey has become a tool for the city and a basis for forming the future land use plan.

The influence of the city extends beyond the city limits. Home, business and industry which are located just outside the city limits are also influenced. Thus, when planning the city, the entire area must be considered. This area, called the planning area, has been made the subject of this report.

Given, during the development of a land use plan, detailed statistics of existing land use must be collected. These statistics are called planning statistics. Their purposes are selected as follows: to show the present use of land and generally follow physical features such as topography, rivers, railroads and highways. The planning area and planning statistics are shown on the map entitled "Planning Statistics."

PLANNING DISTRICTS

CITY OF GOLDSBORO

ROAD

NORTH

12

11

SCALE

3000

6000

13

10

9

14

8

7

3

4

5

6

2

21

18

20

LITTLE RIVER

SOUTHERN R.D.

RIVER

CENTRAL BUSINESS DISTRICT

S. GEORGE ST

SOUTH JOHN ST

U.S. 17 B.Y. PASS

N.C. 521

N.C. 82

WY. 151 ST

W. 4th ST

STONEY CREEK

CLINTON

W. 1st ST

W. 2nd ST

W. 3rd ST

W. 4th ST

W. 5th ST

W. 6th ST

W. 7th ST

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W. 100th ST

Special emphasis is given in this report to the suitability of vacant land for various types of land use. In this connection, the following factors, which determine the suitability of land for development were examined:

- 1) the existence of access to rail and highway facilities.
- 2) the availability, or likelihood of availability during the planning period,¹ of water and sewer service.
- 3) the characteristics of the terrain and probability of flooding.
- 4) the interrelationship of the various land uses and its effect on the physical environment.
- 5) the size of tracts or parcels.

Existing Land Use

The focal point of Goldsboro's land use pattern is its central business district which once was at the city's geographical center. More recently, however, growth has not occurred symmetrically with respect to the central business district. Instead, practically all of the recent growth has occurred in an easterly direction. This may be due in part to the confining effect of the railroad on the west and to the recent pulling effect of Seymour Johnson Air Force base, located on the east of Goldsboro.

Generally, the residential areas in the eastern portion of the city are stable and free from mixed land uses. Their long life as good residential areas can be further insured by a judicious arrangement of

¹ A planning period of 20 years, extending to 1980, was used in this analysis of vacant land.

such residential complements as adequate park land and shopping areas. Residential land on the periphery of the central business district is being blighted by the encroachment of commercial uses. This blighting influence can be observed along William Street and other areas of transitional land use.

Strip or ribbon type development decreases the efficiency of thoroughfares, adds an unnecessary hazard to driving and extends urban areas to unmanageable distances from the central city. This type of development is found along many of the highways extending outward from Goldsboro. Notable examples of this type of development are found at both ends of U. S. route 117 as it passes through the city.

Industrial and wholesale areas are generally in the western one-half of the city. For the most part, they are not in cohesive areas, but are interspersed with other land uses. Large quantities of industrial land have been developed along the Atlantic Coast Line Railroad north and south of the central business district and extending in those directions for considerable distances beyond the city limits.

Especially notable on the land use map are large quantities of public and institutional land. Although the aforementioned air force base accounts for the largest quantity of this land, it is not the only major public use. West of the city is the state hospital and its surrounding grounds. South of the city is the Goldsboro Country Club which also makes a notable impression on the land use pattern.

The effects of Seymour Johnson Air Force Base on the Goldsboro land use pattern are further emphasized by the growth of the outlying business and residential community of Adamsville.

More specific notes concerning existing land uses and their inter-relationships are in subsequent sections of this report which describe land use and land capability in smaller segments of the city.

Data showing the acreages devoted to the various land use categories are presented in Tables 1 through 4 on the following pages. These areas were taken from land use maps which were prepared in 1959 and checked with reference to aerial photographs flown of the Goldsboro area.

Vacant Land Capability

Vacant land, as termed in this analysis, is considered to be all that area which is not in urban type development. Table 5 and the map entitled "Land Capability" give a detailed account of the amount and location of this land. As can be seen from these references, the vacant land within the city limits in 1959 contained 834.4 acres -- over one fourth of the total incorporated area of the city. There is, however, virtually no acreage within the city limits which is subject to periodic flooding or which is not anticipated to be served by sewers and water within the planning period. Most of the vacant land in the city is "prime" for development -- which means that the land has reasonable access to major highways; that it is served by sewers and water; that it is not subject to flooding and that slope creates no undue problems of development.

TABLE 1
SUMMARY OF EXISTING LAND USE
GOLDSBORO, N. C.

USE	CITY (Acres)	FRINGE (Acres)	TOTAL (Acres)	Dev. Land	Total Land
Residential	1234.8	753.4	1988.2	41.9	8.0
Single-family	1046.8	691.5	1738.3		
Two-family	69.8	24.3	94.1		
Multi-family	118.2	37.6	155.8		
Commercial	140.8	131.7	272.5	5.7	1.1
Industrial	94.6	95.4	190.0	3.8	.8
Wholesale	74.0	21.2	95.2	2.0	.4
Transp, Commun., Public Util.	26.5	12.1	38.6	.8	.2
Public	162.9	582.6	745.5	15.6	3.4
Institutional	89.8	24.4	114.2	2.6	.5
Streets	603.4	734.1	1337.5	27.6	5.4
TOTAL DEVELOPED	2426.8	2354.9	4781.7	100.0	19.8
VACANT	834.4	18635.6	19470.0	----	80.2
TOTAL AREA	3261.2	20990.5	24251.7	----	100.0

EXISTING LAND USE WITHIN CITY LIMITS

GOLDSBORO, N. C.

(CENTRAL BUSINESS DISTRICT INCLUDED IN PLANNING DISTRICTS 1, 2, 3, 5, AND 6)

USE	P L A N N I N G D I S T R I C T S								TOTAL	% Dev. Land	% Total Land
	1	2	3	4	5	6	7	8			
Residential	97.3	60.0	65.0	157.4	178.4	244.4	196.6	235.7	1234.8	51.8	38.3
Single-family	88.7	46.2	59.2	150.0	145.4	169.6	192.0	194.4	1045.5	---	---
Two-family	6.8	6.9	5.6	6.3	18.7	22.6	2.9	1.3	71.1	---	---
Multi-family	2.8	6.9	.2	1.1	14.3	52.2	1.7	40.0	118.2	---	---
Commercial	18.0	21.2	12.0	35.0	31.2	15.2	.6	7.6	140.8	5.8	4.3
Industrial	33.1	3.4	15.9	28.0	2.2	11.4	---	.6	94.6	4.0	2.9
Wholesale	8.6	.6	35.0	14.3	8.6	6.9	---	---	74.0	3.1	2.3
Transp., Commun., Pub.Util.	2.9	9.8	3.4	1.7	1.8	6.9	---	---	26.5	1.1	.8
Public	50.8	1.2	---	14.3	17.4	36.7	---	42.5	162.9	6.8	5.1
Institutional	4.2	8.5	.6	3.4	7.3	28.1	6.3	31.4	89.8	3.8	2.8
Streets	96.7	29.5	53.1	87.3	72.9	104.0	72.8	87.1	603.4	23.6	17.5
TOTAL DEVELOPED	311.6	134.2	185.0	341.4	319.8	453.6	276.3	404.9	2425.8	100.0	74.0
VACANT	235.9	33.5	132.2	150.0	23.1	161.2	55.0	43.5	834.4	---	26.0
TOTAL AREA	547.5	167.7	317.2	491.4	342.9	614.8	331.3	448.4	3261.2	---	100.0

EXISTING LAND USE OUTSIDE CITY LIMITS

GOLDSBORO, N. C.

8

USE	9	10	11	12	13	14	15	16	17	18	19	20	21	TOTAL
Residential	23.1	26.6	134.7	113.2	1.7	4.6	40.0	141.5	18.4	26.9	150.2	11.5	63.0	755.4
Single-family	22.0	24.7	132.9	113.2	1.7	4.6	40.0	141.5	18.4	26.3	130.7	10.3	25.2	691.5
Two-family	1.1	1.9	1.8	---	---	---	---	---	---	.6	19.5	1.2	.5	26.6
Multi-family	---	---	---	---	---	---	---	---	---	---	---	---	37.3	37.3
Commercial	1.1	6.3	45.9	3.2	---	.6	20.0	4.1	.6	13.2	2.3	17.8	16.6	131.7
Industrial	---	---	12.6	---	---	---	16.6	10.1	---	4.6	---	45.8	5.7	95.4
Wholesale	---	---	---	---	---	---	21.2	---	---	---	---	---	---	21.2
Trans., Commun. & Publ. Util.	---	---	---	---	---	---	---	---	---	9.2	---	2.9	---	12.1
Public	---	---	52.7	---	---	---	---	2.3	3.0	81.4	302.1	.6	140.5	582.6
Institutional	.5	.8	1.2	---	---	---	2.9	.5	4.0	1.7	.5	2.3	10.0	24.4
Streets	63.9	56.5	107.2	107.0	17.2	34.5	31.0	71.6	20.0	57.7	54.0	31.5	82.0	734.1
TOT. DEVELOPED	88.6	90.2	354.3	223.4	18.9	39.7	131.7	230.1	46.0	194.7	509.1	112.4	317.8	2356.9
VACANT	250.0	389.0	2053.7	3408.6	540.0	104.0	593.3	3679.9	458.1	986.3	2902.9	978.6	2291.2	18635.6
TOTAL AREA	338.6	479.2	2408.0	3632.0	558.9	143.7	725.0	3910.0	504.1	1181.0	3412.0	1091.0	2609.0	20992.5

TABLE 4

COMMERCIAL LAND USES OTHER THAN THOSE
LOCATED IN THE CENTRAL BUSINESS DISTRICT

GOLDSBORO, N. C.

PLANNING DISTRICT		LOCAL SERVING (Acres)	REGION SERVING (Acres)	HIGHWAY SERVING (Acres)	TOTAL (Acres)
CITY	1	.5	5.9	3.9	10.3
	2	.1	4.6	---	4.7
	3	---	6.6	2.6	9.2
	4	8.0	23.7	3.3	35.0
	5	---	5.7	---	5.7
	6	6.4	7.5	---	13.9
	7	---	.6	---	.6
	8	1.7	5.3	.6	7.6
CITY TOTAL		16.7	59.9	10.4	87.0
FRINGE	9	---	1.1	---	1.1
	10	3.4	.6	2.3	6.3
	11	---	24.7	21.2	45.9
	12	---	1.4	1.8	3.2
	13	---	---	---	---
	14	---	.4	.2	.6
	15	1.8	3.2	15.0	20.0
	16	.3	.8	3.0	4.1
	17	---	---	.6	.6
	18	---	12.1	1.1	13.2
	19	2.1	---	.2	2.3
	20	7.0	10.0	.8	17.8
	21	.9	6.3	9.4	16.6
FRINGE TOTAL		15.5	60.6	55.6	131.7
TOTAL PLANNING AREA		32.2	120.5	66.0	218.7

STATISTICAL SUMMARY OF VACANT LAND CAPABILITY BY PLANNING DISTRICTS

GOLDSBORO, N. C.

PLANNING DISTRICT	ACREAGE NOW DEVELOPED	U N D E R MARGINAL (Subject to Flooding)	E L O P E D		A C R E A G E	TOTAL UN- DEVELOPED ACREAGE	TOTAL LAND (Acres)
			NOT LIKELY TO BE SERVED BY SEWER	NOT WITHIN 500' OF RAIL OR HIGHWAY			
CITY							
1	311.6	--	--	10.8	225.1	235.9	547.5
2	134.2	--	--	.5	33.0	33.5	167.7
3	185.0	--	--	79.2	95.5	132.2	317.2
4	341.4	--	--	70.2	79.8	150.0	491.4
5	319.8	--	--	22.3	.8	23.1	342.9
6	453.6	--	--	134.2	2.7	161.2	614.8
7	276.3	--	--	48.9	6.1	55.0	331.3
8	404.9	--	--	4.5	39.0	43.5	448.4
CITY TOTAL	2426.8	--	--	293.1	541.3	834.4	3261.2
FRINGE							
9	88.6	40.0	--	210.0	--	250.0	338.6
10	88.3	10.2	--	230.3	148.5	389.0	477.3
11	354.3	47.0	1096.7	520.0	390.0	2053.7	2408.0
12	223.4	40.3	3099.0	109.0	160.3	3408.6	3632.0
13	18.9	43.1	190.4	228.0	78.5	540.0	558.9
14	39.7	--	--	74.0	30.0	104.0	143.7
15	131.7	4.5	220.2	265.7	102.9	593.3	725.0
16	230.1	239.2	3343.5	16.2	81.0	3679.9	3910.0
17	46.9	49.0	134.3	256.8	18.0	458.1	505.0
18	194.7	174.0	785.0	6.9	20.4	986.3	1181.0
19	509.1	402.3	2500.6	--	--	2902.9	3412.0
20	111.4	360.3	212.0	145.0	261.3	978.6	1090.0
21	317.8	260.0	496.0	1216.6	318.6	2291.2	2609.0
FRINGE TOTAL	2354.9	1669.9	12,077.7	3278.5	1609.5	18,635.6	20,990.5
PLANNING AREA TOTAL	4781.7	1669.9	12,077.7	3571.6	2150.5	19,470.0	24,251.7

This plan was prepared for the City of Goldsboro, North Carolina, and is not to be used for any other purpose without the written consent of the City of Goldsboro, North Carolina.



LEGEND

- DEVELOPED AREA
- SWAMPY AND/OR SUBJECT TO FLOOD
- POSSIBLE COVERAGE OF
WATER DISTRIBUTION
- POSSIBLE COVERAGE OF
SEWERAGE DISTRIBUTION

Since practically all the land is relatively flat, slope characteristics in the Goldsboro planning area are not an important influence in future land allocation.

The largest amounts of swampy land, and that which is subject to periodic flooding, are along the Little and Neuse Rivers. Relatively small amounts of this marginal land border Stoney Creek.

The greatest single category of "non-prime" land is that land which is not likely to be served by water and sewers within the planning period. Well over one-half of the planning area falls within this category. Most of the land which is in this classification is not likely to be intensively developed for some time because of its distance from the central city.

Analysis of Planning Districts

As was mentioned above, small areas, called planning districts are often referred to. They are used to focus attention on problem areas and to provide more manageable planning data. Below is an analysis of existing land use and vacant land within each planning district.

Planning District 1

This district has large acreages adjacent to main line railway and major highway facilities. It appears to be a likely area for industrial expansion.

Almost all the area is either served by water and sewers now, or is capable of being served when the proposed new sewage outfalls are installed.

The land in this district is flat. It has less slope than in most other planning districts and is generally low.

Different types of development in this district are intermixed to a great degree. A high percentage of the land is used for residential purposes and it ranges from substandard to fair, in quality. A portion of the central business district lies within this district.

About one tenth of the district's acreage is subject to flooding. Most of this land falls within the western portion of this planning district.

Approximately one third of this district is vacant. A large amount of it is in tracts of five acres or more. The larger parcels are south of West Elm Street on South George and South John Streets.

Planning District No. 2

The dominant type of development in this district is older, two-story housing that is generally in fair to excellent repair.

Water and sewer facilities now cover most of this district. The remainder of the area, except for the westernmost tip, is assumed to have water and sewer facilities within the planning period.

Roughness of terrain and swampiness should not create any problems for the complete development of this area.

The areas of older, residential land, just west of the central business district, are in a state of transition to business and professional offices

and retail outlets. Even so, these areas are not markedly suffering from blight as is characteristic of such zones of transition. The residential character is being maintained through the construction of new, one-story dwellings and the repair of the older homes.

Some industrially used land is in the vicinity of Georgia and Mulberry Streets and along the railroad. Farther west of that area are the greater amounts of vacant land and poorer quality housing.

The vacant land, mentioned previously, appears to be adaptable to future wholesaling and/or industrial use because it is in larger parcels which are served by railroad and major highway facilities.

Planning District No. 3

First impressions of this district come from the substandard to fair quality, white and Negro housing, interspersed with wholesaling and manufacturing establishments located within it.

The terrain is generally of a more hilly and upland character than the preceding planning districts. Even so, the land is not so rough as to create a real problem in development.

Practically the entire area is now served by water and sewer facilities. Only a small portion in the extreme southwest corner of the district is presumed to lack these facilities at the end of the planning period.

The housing in the area is predominantly single-family, older and of poor quality. Slum housing areas are in the northern portion of the district.

The highway commercial, industrial and wholesaling development is generally new and of good quality. The areas of intensive use, other than along Highway 117-bypass, are older and of poor quality.

Vacant land along the highway appears to be especially suitable for an "industrial park" type of development. Vacant land south of the highway area is also more suited to industrial and wholesaling uses due to the rail facilities that are available.

Planning District No. 4

Types of development in this area are probably more varied than any other planning district. There are several areas of strip commercial development and other areas of strip industrial and wholesaling. Some of the worst slums and some of the new upper middle income housing exist in close proximity to each other.

The terrain is generally rolling and high and therefore ideally suited to future development. The Big Ditch drainage corridor runs through the middle of this district and creates some areas of unbuildable land.

The entire area is served by water and sewer facilities.

The qualities and types of developed land have been previously mentioned. In addition to those generalities, there are large areas of industrially used land along the railroads which form the west and south boundaries of the planning district.

Vacant land along the major highways and railroads is scarce and in smaller parcels than in previous planning districts. The major portion of the remaining vacant land, in the vicinity of the Big Ditch Creek and south of Stronach Street, seems to be more suited to park land or residential usage.

Planning District No. 5

This is an area which includes the central business district, an area of transition between residential land and the central business district, and some of the finer residential areas of Goldsboro.

Water and sewer facilities are now in existence and serving the entire planning district.

Big Ditch Creek flows through the area but creates very little unbuildable land because it is well controlled. The terrain, in general, is adaptable to any type of development.

Residential quality ranges from fair to excellent. Some apartment and boarding homes are beginning to need repairs, but the remainder of the houses appear very sound. The houses are predominantly two-story, older structures.

There are only small amounts of vacant land in the district. This area is probably more completely developed than any other planning district.

vacant land along the major highways and railroad is scarce and in smaller parcels than in previous planning districts. The major portion of the remaining vacant land, in the vicinity of the Big Branch Creek and south of Division Street, seems to be more suited to park land or residential usage.

Planning District No. 2

This is an area which includes the central business district, an area of transition between residential land and the central business district, and some of the inner residential areas of Columbus.

Water and sewer facilities are now in existence and serving the entire planning district.

Big Branch Creek flows through the area but creates very little undesirable land because it is well controlled. The terrain, in general, is adaptable to any type of development.

Residential quality ranges from fair to excellent. Some apartment and boarding houses are beginning to show signs of wear and tear, but the remainder of the houses appear very sound. The houses are predominantly two-story, single-story.

There are only small amounts of vacant land in the district. This area is probably more completely developed than any other planning district.

Planning District No. 6

This is another area of varied types of land development. There is complete coverage of water and sewer facilities and the topography is generally suitable for any type of development.

This district is characterized by residential sections occupied alternately by Negro and white families. The land uses are mixed along South Slocumb, South John and East Elm Streets. The residential quality is generally poor, excepting the north-east portion of the planning district.

The major areas of undeveloped land are along Big Ditch Creek and the southern part of South John and South Slocumb streets. Industrial and wholesaling usage would seem to be the most desirable future use for this area.

Planning District No. 7

This is one of the most stable and unified planning districts. Practically all the development is single-family, middle-income housing. The quality of this housing is excellent and it is relatively new.

There are no problems which would be created by adverse terrain and the entire area is now being served by water and sewer facilities.

Practically all the vacant land of this district is in the north-east section. This undeveloped land seems best suited to either similar residential development or some attendant land usage.

Planning District No. 8

This district is very similar to Planning District No. 7 in character. However, there is a wider range in the quality of residential structures.

The entire area is now served by sewer and water facilities and the terrain is ideally suited to any kind of development.

Sunrise Shopping Center is in this district and serves a large residential area. Jefferson Park housing development makes up the northern part of this district. Some houses of poorer quality exist along the railroad tracks.

The small proportion of undeveloped land in this district is generally in the eastern part. It is probably best suited for future development of residential or a related use.

Planning District No. 9

This area is generally undeveloped with some scattered housing.

Stoney Creek makes up the eastern boundary of this district and creates some large acreages of land that are subject to flooding. The terrain in the eastern section is, in some parts, quite hilly and would create some problems in construction.

The best quality houses are along Claiborne Street. Along Elm Street and to the south is poorer housing. Some mixture of land uses occurs along Elm Street.

Many streets are platted in this district but only a few are in existence. Only a small portion of this area is being served by water and sewer facilities but it is assumed that the remainder will have those facilities within the planning period.

An extension of residential development would be the best use to which this district could be put. Park land or farms would seem to be the best uses for the area adjacent to Stoney Creek.

Planning District No. 10

This district consists mainly of undeveloped, agriculturally used land. There are many scattered farm houses. The urbanized sections of this district are found along Snow Hill Road and in the vicinity of the intersection of Peachtree Street and Taylor Street.

Along the eastern boundary, which is Stoney Creek, a considerable amount of land is subject to flooding. The terrain is rolling.

Only small parts of the areas which are adjacent to the city limits are now being served by water and sewer facilities. The rest of the district, however, is assumed to be served by those facilities within the planning period.

The urbanized area in the vicinity of the intersection of Peachtree and Taylor Streets is of excellent quality and of single-family, new housing. The area along the south side of Snow Hill Road is made up of poor quality housing and commercial establishments.

Most of the vacant land seems to be likely to be developed within the next twenty years. It is best suited for residential development except those flood-areas along Stoney Creek and the land adjacent to the railroad.

Planning District No. 11

The main entrance to Seymour Johnson Air Force Base is close to this district. Thus, its influence is evident. Marginal commercial strip development, a dominant feature of the highways in the vicinity of the Air Force Base, is partially a result of this influence.

The topography is generally suitable for any kind of development. There are some areas, along Stoney Creek, which are unbuildable due to the possibility of flooding.

It is assumed that about one third of the entire district will be served by water and sewer lines within the planning period. None of this district is now being serviced by those facilities.

There is some good quality housing on N. C. Highway 102 and Elm Street. The remaining housing in this district is scattered.

The western portion of the district will probably be built up as residential land within the next twenty years. Most of the district, however, should remain as open farm land.

Planning District No. 12

This area is practically all open and undeveloped.

The south-west corner will probably have water and sewer facilities within the planning period.

From the standpoint of ideal terrain, rail and highway facilities, and the previously mentioned water and sewer service, the south-west corner would be adaptable to any type of development. The remainder of the district will not likely be developed within the planning period.

Planning District No. 13

There is virtually no development in this district now. This seems to be an area which could expect urbanization throughout the southern portion. Site construction has already begun for a housing development to the north of Jefferson Park subdivision.

The southern half of the district is likely to be served by water and sewer facilities within the planning period.

All of the district, with exception of the flood-subject land adjacent to Stoney Creek, is capable of being developed. It is likely, however, that the northern half of the district will remain undeveloped.

Planning District No. 14

This district is comprised mostly of vacant land. It has some scattered housing of poor quality. Practically all the streets are unpaved and in

bad condition.

The area is not served by water and sewer facilities but it may be served within the planning period.

There is some marshy land adjacent to Big Ditch Creek but, other than that, all the district is topographically capable of development.

This area seems most suitable for future residential or park development.

Planning District No. 15

The most striking characteristic of this district is the strip development on U. S. Highway 117 North. Water and sewer facilities are now existing to serve this strip development and the Drueping Brothers Company. The remainder of the area is expected to remain unserved by sewers and water, with some exceptions of extensions of existing service lines.

Most all the houses which are not on a major road or highway, are occupied by Negro families. Middle-income housing exists on Patetown Road and on Highway 117.

Though the great majority of land in this district is undeveloped, the land along major roads is intensively developed with mixed land uses. It seems likely this trend will be continued unless controls are introduced to stop the intermixing of different types of development.

Planning District No. 16

This is primarily a district of agricultural land.

There is only one small area which is now, or will be in the future, served by Goldsboro sewerage and water. It is the area adjacent to the north side of the Drueding Brothers Company on Highway 117-North.

Development in this district is primarily of strip residential and commercial usage along the major roads and highways. Extensive development is not foreseen to take place in this district during the planning period. However, from the standpoint of terrain and railroad and highway facilities, development is possible.

Planning District No. 17

The main development in this district is along Salem Church Road. The built-up portions are single-family, middle-income houses. The remaining land is developed with scattered farm houses.

City water is piped along Salem Church Road which is the only municipal service this district enjoys. Within the planning period, it is assumed that water service will be expanded but sewerage service will not be available.

Large areas of land subject to flooding are adjacent to the Little River. The remainder of the district is capable of being developed from the topographic viewpoint.

Open land is being used for agricultural purposes and this seems to be the most suitable use for the future.

Planning District No. 18

Strip commercial and residential land use along U. S. Highway 70 is a dominant feature of this district. Another major portion of land is the area devoted to the Cherry Hospital and its farm land.

The Cherry Hospital area has its own water and sewer system while the remaining area has no water or sewer facilities other than those which are privately furnished.

The areas adjacent to the Little River are generally either subject to flooding or are swampy. The remainder is all low but evidently not subject to periodic flooding.

Housing along Highway 70 is fairly new but scattered. The buildings and the more intensively improved lands of the Cherry Hospital are all very well repaired and maintained.

The land adjacent to U. S. Highway 117-Bypass is almost all vacant. The fact that no city facilities are available is probably the main reason for the lack of development. It is assumed that city water can be made to serve nearly all of the eastern half of the planning district, however; sewer service is not expected to be available for this district during the planning period.

Planning District No. 19

Residential development is adjacent to the part of Highway 70 that is in this district. A major portion of Cherry Hospital and its attendant farm lands and facilities are in this area.

As in the preceding planning district, there are large areas along the Little River which are swampy or are subject to flooding. In general, however, there are not such large areas of low-lying lands as in the Planning District 18.

The residential development along Highway 70 is generally of a fairly high quality. The housing connected with the hospital area is generally older but it is well maintained and repaired, as are all the facilities of the hospital.

Urbanization is not expected to take place in this district due to the large areas in use by the hospital and the distance from municipal services.

Planning District No. 20

Nearly one-half of this area is subject to periodic flooding or is of a swampy nature along the Little and Neuse Rivers. The remaining land is all low and flat except those areas which were filled for buildings and roadways. The area east of Highway 117 seems well protected from flooding with the highway acting as a dike.

No sewer or water facilities are now available in this district. It is expected that the north-east part will be served by those facilities

within the planning period.

Housing consists of scattered substandard dwellings, most of which are on Old Waynesboro Road and Paul Street. The rest of the development is industrial and wholesaling with some commercial.

Industrial and wholesaling uses seem most suitable for future development due to the proximity of rail and highway facilities.

Planning District No. 21

The Goldsboro Country Club is the largest single user of land in this area. Another major land use is the public housing area on South Slocumb Street Extension.

Large acreages of swampy and flood-subject land are adjacent to the Neuse River and Stoney Creek. These areas are generally too far from Goldsboro to create a deterrent to land development in this district. No other topographic characteristic should cause problems for future land use.

Existing municipal water and sewer facilities are negligible. Those facilities are expected within the planning period, in the northern two-thirds of the district.

Housing is mostly of a relatively new, single-family, modest type, except for the public housing which was previously mentioned.

On the basis of general availability of useable land for future development, and other factors, this seems to be a prime district for residential expansion.

LOCATION STANDARDS AND FUTURE SPACE
REQUIREMENTS FOR MAJOR LAND USES

GOLDSBORO, NORTH CAROLINA

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City Planning and Architectural Associates

201 East Rosemary Street

Chapel Hill, North Carolina

June, 1960

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PURPOSE

The purpose of this report is to state the location requirements and to develop space standards for future land uses. The end product is a derivation of land use needs for the City of Goldsboro which are based on these standards and related to estimates of population and economic growth.

FINDINGS

Summary of 1980 Space Requirements for Major Land Use Categories

Use	Existing Acreage	Additional Acreage Required	1980 Acreage
Industrial	190	110	300
Industrial Reserve	-	275	275
Wholesaling	95	70	165
Commercial (not in CBD)			
Region Serving	120	32	152
Highway Serving	66	33	99
Local Serving	32	23	55
Residential	1990	1416	3406
Parks and Recreation	150	397	547
Schools	106	150	256

INDUSTRIAL AND WHOLESALING

Industrial and wholesaling activities form the major portion of Goldsboro's economic base. These uses require level sites, good service by utilities and access to highway and other transportation facilities. Because of their importance to city growth and economic health, these uses should enjoy a priority for prime land, that is, land which possesses the above qualities.

Location Standards

The following are recommended location standards for industrial and wholesaling areas in the Goldsboro area:

1. Land for industry should be reasonably level, preferably with not more than five percent slope. Also it should not be swampy or subject to periodic flooding. The Goldsboro planning area contains a very small amount of land that has a slope of over five percent, however, swampy areas and those subject to periodic flooding comprise a substantial percentage of the total land area. Thus, these areas must be avoided when locating industrial and wholesaling activities.
2. A range in choice of close-in and fringe locations must be provided in order that new industries may select sites which fit their specific needs. Because of their potential incompatibility with other uses, and vice versa, industrial and wholesaling areas should be concentrated rather than scattered throughout the city. Other factors must be considered in relation to adjoining land uses, such as: prevailing winds, possibility of protective belts of open space, and development of "industrial parks".

3. Industrial and wholesaling operations require major transportation facilities for the movement of raw materials and finished products to and from their plants and for the movement of workers to and from their homes. Access is needed to highway and rail facilities as well as to major streets which carry intra-city traffic.

4. Since industrial operations generally use large quantities of water and create wastes in substantial volume, sites for the location of such uses should be provided where water and sewer facilities are already available or where they can be installed without incurring excessive costs.

Future Space Requirements

There are 190.0 acres being used for industrial purposes in the Goldsboro planning area at the present time; 94.6 acres within city limits and 95.4 acres in the fringe. By the application of an adjusted density ratio of employees per gross industrial acre and certain assumptions noted below, a computed industrial area of 300 acres is estimated to be needed by the end of the planning period. The derivation of this space requirement is shown on Table 1. An additional industrial reserve of 275 acres is recommended to be set aside to accommodate an unexpected large industry or general growth which might be greater than normal. This additional land for industrial use also gives the flexibility needed to offer new industries a choice of site locations within the Goldsboro area.

Wholesaling areas now being used total 95.2 acres, with 74.0 acres inside the city and 21.2 acres in the fringe. A total of 150 acres is estimated to be in wholesaling uses in the planning area by 1980.

TABLE 1

DERIVATION OF SPACE REQUIREMENTS FOR INDUSTRIAL

AND WHOLESALING USES - 1980, GOLDSBORO, N.C.

	<u>Industrial</u>	<u>Wholesaling</u>	<u>Total</u>
Existing			
1. Employees	2500	1000	3500
2. Acreage Within City Limits	94.6	74.0	168.6
3. Acreage Outside City Limits	95.4	21.2	116.6
4. Total Planning Area Acreage	190.0	95.2	285.2
5. Density Ratio - Employees Per Acre (Line 1 ÷ Line 4)	13.2	10.5	12.7
Projected For 1980			
6. Employees	3500	1200	4700
7. Assumed Density Ratio - Employees Per Acre	13.0	8.0	---
8. Total Planning Area Acreage Computed (Line 6 ÷ Line 7)	270.0	150.0	420.0
9. 10% Safety Factor	30.0	15.0	45.0
10. Total Land Allocated	300.0	165.0	465.0
11. Industrial Reserve	275.0		

This projection is obtained by the ratio method employed above to derive future industrial space requirements and is also shown on Table 1. An extra 15 acres, or 10% of the computed future wholesale space requirements have been included in the total acreage to accommodate growth that is greater than expected.

The total projected acreage of 465 acres for industrial and wholesaling uses is based on the assumption that the economy will continue to prosper, but at a lesser rate than the period immediately following World War II. The density estimates were made on the basis of a continued trend of existing employee densities in Goldsboro, lowered slightly to indicate the trend toward more extensive industrial and wholesaling operations in terms of sites and buildings. The forecast of future employees is based on a projection of past employment trends as well as a projection of Goldsboro's overall economic growth.

Region Serving and Highway Serving Commercial Areas Not Located in the Central Business District

REGION SERVING

Commercial areas which draw customers from throughout the city and its trading area are classified as region serving businesses. These are distinguished from the local shopping establishments which supply the daily consumer needs in their immediate area. The region serving businesses present special problems to land use planning and zoning because of certain characteristics these commercial activities share:

1. They are generally oriented toward the automobile rather than the pedestrian and therefore contribute to traffic congestion and parking problems;
2. they require areas adjacent to important traffic arteries;
3. they require relatively large sites in relation to total sales volume; and
4. certain region serving commercial uses may be incompatible with surrounding land uses because of the large traffic volumes generated, noise of operation, or other irritants which might disturb the surrounding area.

Location Standards

Locations for regional shopping centers are found by exacting studies of purchasing power, buying habits, family expenditure patterns and a variety of other investigations which are conducted because of the heavy initial investment that is required to start a business of this type. The scope of this report requires a more general approach to the problem of location. The current trend toward centers of business

activity appears to be the fundamental basis for locating these region serving businesses rather than the more common procedure of stretching out the development along major thoroughfares.

Emphasizing Goldsboro's existing business centers and strengthening controls to allow a de-emphasis of existing strip development seems to be a first step towards a balanced land use plan. On the basis of projected space requirements, additional area for business growth should be allocated to shopping areas in the sections of the city where growth is taking place.

Particular requirements for locating region serving business activities include: reasonably level land which is not subject to periodic flooding; access to major thoroughfares and highways; adequate water and sewer service; and adequate space, particularly for service and parking functions.

Future Space Requirements

Space needs for region serving commercial activities have been forecasted on the assumption that such activities will expand in direct proportion to the population growth in a delineated retail trade area. The retail trade area is that area which is primarily served by Goldsboro's retail outlets. This is defined as including all of Wayne County and the adjacent townships in Greene, Lenoir, Duplin, Samson, and Johnston Counties. The 1960 population of this area is approximately 135,000. By 1980, it is expected that there will be 170,000 people in the retail trade area or an increase of 26%. Applying this percentage increase to the existing 120.5 acres of region serving commercial land outside the central business district gives an increase of 31.5 acres or a total of 152.0 acres by 1980.

HIGHWAY SERVING

Location Standards

Highway serving commercial facilities are those businesses which cater to the motoring public, such as motels, roadside restaurants, and service stations. This classification shares many characteristics with outlying region serving businesses, therefore, they require the same basic location standards. Highway serving facilities, as the name implies, are even more directly oriented toward the automobile and heavy traffic volumes than region serving businesses. It is mandatory that highway service centers be located on major highways rather than major streets. Because of the traffic and other attendant problems, separation of the highway serving centers from surrounding land uses is essential.

Future Space Requirements

Expansion of highway service facilities is dependent on the growth of inter-city traffic as well as the population growth in the retail trade area. The North Carolina State Highway Department has estimated that there will be approximately an 85% increase in traffic in the Goldsboro area between 1956 and 1978. Considering this expansion along with the estimated 26% increase in the population of the retail trade area, it has been assumed that a 50% expansion in the highway serving business category is the magnitude that might reasonably be expected. Applying this expansion factor against the existing 66 acres in highway business indicates that an additional 33 acres, or a total of 99 acres will be needed by 1980.

Residential and Related Uses

RESIDENTIAL

Location Standards

Land ownership and certain land uses preclude immediate residential expansion in several areas around Goldsboro. In several cases barriers to development have been created which are considered permanent for the purposes of this study. Seymour Johnson Air Force Base is an example of a permanent barrier to further residential expansion in the southeast section of the city. Cherry Hospital forms a barrier to the west of the city.

Forces interacting within the planning area create a "pushing" and "pulling" action on the various types of land use. Again, for example, the Air Force Base is apparently helping to "pull" city expansion in an easterly direction. At the same time, business expansion tends to "push" residential development out of the central business district.

The following location standards are recommended for residential land use:

1. Marshy land, land subject to periodic flooding, and areas of excessive slope should be avoided. The topography of Goldsboro, with few exceptions, allows residential development in all areas. However there are several areas that are subject to periodic flooding which should be avoided.

2. The residential areas should be bounded, but not penetrated, by major thoroughfares to allow direct access to employment, shopping, and leisure-time areas by either private or public transportation.

3. These residential areas should be related to accessory shopping, school, church and recreation facilities as well as other major land use categories.

4. Sewer and water facilities should be available to the residential areas prior to development or be capable of being installed without excessive cost to the home owner, developer, or city government.

Future Space Requirements

Deriving space needs for the expansion of residential areas is especially important considering that this category contains the largest area of all the land uses. It should be noted that only approximate estimates can be derived due to the subjective estimates and assumptions which are introduced at various steps in the analysis. The degree of approximation is in keeping with the scope of this study.

The first step in estimating future space requirements involves an inventory of current dwelling units and existing residential acreage. This inventory is presented on Table 2. The number of dwelling units per acre, or density, is also described for each planning district. The 1950 Census gave the average household size as 3.63 persons for Goldsboro. The land use survey conducted in 1958 revealed a total of 9,422 dwelling units in the Goldsboro Planning Area, with 7,347 in the city and 2,075 in the fringe. The 1958 population was estimated at 27,300 in the city and 6,200 in the fringe or a total of 33,500 for the planning area. Therefore, the 1958 average household sizes are: 3.72 in the city, 3.0 in the fringe and 3.56 for the planning area. Assumed household sizes for 1980 are: 3.62 for the city, 3.05 for the fringe area and 3.41 for the planning area. These assumptions are

TABLE 2

CURRENT STOCK OF DWELLING UNITS, ACREAGE IN RESIDENTIAL USE, AND NET
DENSITIES IN GOLDSBORO PLANNING AREA BY HOUSING TYPE, 1958.

Planning District	Single Family			Two-Family			Multi-Family		
	D.U.'s	Acres	Density	D.U.'s	Acres	Density	D.U.'s	Acres	Density
1	718	88.7	8.1	112	6.8	16.5	36	1.8	20.0
2	189	46.2	4.1	58	6.9	8.4	94	6.9	13.6
3	346	59.2	5.8	76	5.6	13.5	6	.2	30.0
4	821	150.0	5.5	96	6.3	15.2	31	1.1	28.2
5	633	145.4	4.3	182	18.7	9.7	157	14.3	11.0
6	1148	169.6	6.8	312	22.6	13.8	459	52.2	8.8
7	710	192.0	3.7	28	2.9	9.7	8	1.7	4.7
8	752	194.4	3.9	14	1.3	9.3	321	40.0	8.0
City Subtotal	5317	1045.5	5.1	878	71.1	12.3	1112	118.2	9.4
9	52	22.0	2.4	18	1.1	16.4	--	--	--
10	73	24.7	3.0	14	1.9	7.4	--	--	--
11	252	132.9	1.9	26	1.8	14.4	--	--	--
12	185	113.2	1.6	--	--	--	--	--	--
13	10	1.7	5.9	--	--	--	--	--	--
14	43	4.6	9.3	--	--	--	--	--	--
15	185	40.0	4.6	--	--	--	--	--	--
16	215	141.5	1.5	--	--	--	--	--	--
17	49	18.4	2.7	--	--	--	--	--	--
18	101	26.3	3.8	4	.6	6.7	--	--	--
19	141	130.7	1.1	50	19.5	2.6	--	--	--
20	30	10.3	2.9	12	1.2	10.0	--	--	--
21	150	25.2	6.0	6	.5	12.0	420	37.3	11.2
Fringe Subtotal	1486	691.5	2.2	130	26.6	4.9	420	37.3	11.2
Planning Area Total	6803	1737.0	3.9	1008	97.7	10.3	1532	155.5	9.9

Table 2 (Continued)

Planning District	(Trailers, Nurseries, Special Rooming Houses, etc.)			D.U. Totals	Acre Total
	D.U.'S	Acres	Density		
1	2	.2	10.0	868	97.5
2	4	.7	5.7	345	60.7
3	6	.7	8.6	434	65.7
4	--	--	--	948	157.4
5	12	2.0	6.0	984	180.4
6	16	1.4	11.4	1935	245.8
7	--	--	--	746	196.6
8	--	--	--	1087	235.7
City Subtotal	40	5.0	8.0	7347	1239.8
9	--	--	--	70	23.1
10	--	--	--	87	26.6
11	10	2.9	3.5	288	137.6
12	--	--	--	185	113.2
13	--	--	--	10	1.7
14	--	--	--	43	4.6
15	10	2.8	3.6	195	42.8
16	4	1.1	3.6	219	142.6
17	--	--	--	49	18.4
18	--	--	--	105	26.9
19	--	--	--	191	150.2
20	--	--	--	42	11.5
21	15	4.6	3.3	591	67.6
Fringe Subtotal	39	11.4	3.4	2075	766.8
Planning Area Total	79	16.4	4.8	9422	2006.6

Average Densities: City - 5.9, Fringe - 2.7, Planning Area - 4.7

made using previous household sizes as a base and considering the recent trend toward declining family size. It was further assumed that the average household size in the fringe area would tend to rise slightly to more nearly equal the average in the planning area.

Table 3 outlines the sequence of steps taken to derive the new dwelling unit requirements for 1980. There will be an estimated 7,200 new dwelling units in the Goldsboro Planning Area by 1980. The next step is the allocation of this estimated total to the various housing and density types. Table 4 reflects this allocation. The densities (dwelling units per acre) are selected by a local adaption of generally recognized national standards which are considered to be consistent with principles of healthful housing. The allocation of the dwelling unit estimate to the various housing and density types is based on recent housing trends in Goldsboro and comparisons with similar cities. Table 4 also indicates the total acreage needed for the new dwelling units by density type. The estimated 7,200 new dwelling units would require about 1,540 acres in addition to the existing residential area of 1,990 acres. The next step is to allocate the new dwelling units, by density types, to the various planning districts. This is shown on Table 6. Table 7 tabulates the residential land requirements by planning district. This gives an estimate of the area required for residential use in the different sections of the planning area. The areas which are suitable for development have been found and reported in the vacant land and existing land use analyses published in May, 1960. The established trends in Goldsboro indicating the general direction and types of residential growth provide an additional basis for dwelling unit allocation. The preliminary thoroughfare plan also helps

TABLE 3

DERIVATION OF TOTAL NEW DWELLING UNIT REQUIREMENTS - 1980

Sequence of Steps	City	Fringe	Total
1. Population Increase	9600	11,600	21,200
<u>NUMBER OF DWELLING UNITS</u>			
2. Crude, Unadjusted Estimate of Dwelling Units Needed	2616	3644	6260
3. Plus Net Losses in Current Stock of Dwelling Units	538	95	633
Assumed Demolitions	378	63	441
Losses by Use Invasion	140	18	158
Assumed Catastrophe Losses	20	14	34
4. Plus 5% Allowance for Vacancy	222	123	345
5. Total Adjusted Crude Estimate of Dwelling Units Needed	3376	3862	7238
Assumed Conversions	245		
Assumed New Construction	3131		

TABLE 4

ALLOCATION OF TOTAL NEW-CONSTRUCTION DWELLING UNITS BY HOUSING AND
DENSITY TYPES AND DERIVATION OF TOTAL ACREAGE REQUIREMENTS

Density Type	Housing Type	Assumed Average No. D.U.'S / Net Acre	<u>Total Requirements</u>	
			D.U.'s	Acres
A	Single Family	2.8 (15,500)	1218	432.0
B	Single Family	3.9 (11,000)	2296	589.0
C	Single Family	5.0 (8,700)	1676	339.6
D	Two Family	8.0 (5,500)	723	90.0
E	Multi-Family	12.0 (3,600)	1080	90.0
Total			6993	1540.6
Conversions			245	
Total D.U.'S			7238	

TABLE 5

ESTIMATED DISTRIBUTION OF DWELLING UNIT LOSSES BY PLANNING DISTRICT, 1980

Planning District	Current Stock D.U.s	D.U.s Removed by Type of Loss			D.U.s Remaining by 1980
		Demolition	Invasion	Catastrophe	
1	863	58	42	4	764
2	345	21	18	1	305
3	434	44	30	2	358
4	943	94	16	2	836
5	984	29	11	2	942
6	1935	116	8	6	1805
7	746	5	7	1	733
8	1087	11	8	2	1066
City Subtotal	7347	378	140	20	6809
9	70	3	1	1	65
10	87	4	-	1	82
11	288	5	2	-	281
12	185	4	-	-	181
13	10	1	-	-	9
14	43	6	1	1	35
15	195	9	8	4	174
16	219	4	1	1	213
17	49	2	-	1	46
18	105	4	-	-	101
19	191	4	-	1	186
20	42	6	2	2	32
21	591	11	3	2	575
Fringe Subtotal	2075	63	18	14	1980
Planning Area Total	9422	441	158	34	8789

TABLE 6

TOTAL NEW DWELLING UNITS DISTRIBUTED AMONG PLANNING DISTRICTS, 1980 - GOLDSBORO, N. C.

Planning District	Total New D.U.s	No. of D.U.s by Density Type (New Construction)					No. of New D.U.s by Conversion
		A	B	C	D	E	
1	467	-	15	124	194	113	21
2	229	-	39	31	38	81	40
3	71	-	6	7	18	32	8
4	615	-	73	87	174	262	19
5	223	-	29	31	15	110	38
6	1046	29	193	293	176	303	52
7	404	77	191	79	18	24	15
8	321	56	160	81	5	11	8
City Subtotal	3376	162	706	733	638	936	201
99	572	199	317	30	4	16	6
10	719	222	402	68	8	13	6
11	380	102	152	82	12	22	10
12	129	59	62	8	--	--	--
13	508	192	222	82	4	6	2
14	255	11	29	148	28	31	8
15	364	63	72	190	20	19	--
16	122	48	61	8	--	--	5
17	287	75	98	103	2	6	3
18	158	23	93	30	2	6	4
19	67	16	21	30	--	--	--
20	75	5	8	54	--	8	--
21	226	41	53	110	6	16	--
Fringe Subtotal	3862	1056	1590	943	86	143	44
Planning Area Total	7238	1218	2296	1676	724	1079	245

TABLE 7

RESIDENTIAL LAND REQUIREMENTS BY PLANNING DISTRICTS, 1980 - GOLDSBORO, N. C.

Planning District	Existing Acres	Acres Losses	Remaining Acres	Add'l Area Needed by Housing Type					Total Acres Required	Total Add'l Acres
				A	B	C	D	E		
1	97.3	12.9	84.4	-	3.8	24.9	24.3	9.4	146.8	62.4
2	60.0	9.8	50.2	-	10.0	6.2	4.7	6.7	77.8	27.6
3	65.0	13.1	51.9	-	1.5	1.4	2.2	2.7	59.7	7.8
4	157.4	20.4	137.0	-	18.8	17.4	21.8	21.8	216.8	79.8
5	178.4	9.8	168.6	-	7.4	6.2	1.9	9.2	193.3	24.7
6	244.4	19.1	225.3	11.1	50.0	58.5	22.0	25.2	392.1	166.8
7	196.6	3.5	193.1	27.5	49.0	15.8	2.3	2.0	289.7	96.6
8	235.7	5.4	230.3	20.0	41.2	16.1	.6	.9	309.1	78.8
City Subtotal	1234.8	90.4	1144.4	58.6	181.7	146.5	79.8	77.9	1688.9	544.5
9	23.1	1.9	21.2	71.2	81.3	6.0	.5	1.3	181.5	160.3
10	26.6	1.9	24.7	79.3	106.0	13.2	1.0	1.1	225.3	200.6
11	134.7	2.6	132.1	36.7	39.0	16.4	1.5	1.8	227.5	95.4
12	113.2	1.5	111.7	21.1	15.9	1.6	-	-	150.3	38.6
13	1.7	.3	1.4	68.5	54.4	16.4	.5	.5	141.7	140.3
14	4.6	2.9	1.7	3.4	7.4	29.6	3.5	2.6	48.2	46.5
15	40.0	7.8	32.2	22.4	18.5	38.4	2.5	1.6	115.6	83.4
16	141.5	2.2	139.3	17.1	15.6	1.6	-	-	173.6	34.3
17	18.4	1.1	17.3	26.8	25.0	20.6	.2	.5	90.4	73.1
18	26.9	1.5	25.4	8.2	23.8	6.0	.2	.5	64.1	38.7
19	150.2	1.9	148.3	5.7	5.4	6.0	-	-	165.4	17.1
20	11.5	3.0	8.5	1.8	2.2	10.8	-	.7	24.0	15.5
21	63.0	5.9	57.1	14.6	13.6	22.0	.8	1.3	109.4	52.3
Pringe Subtotal	755.4	34.5	720.9	376.8	408.1	188.6	10.7	11.9	1717.0	996.1
Planning Area Total 1990.2	124.9		1865.3	435.4	589.8	335.1	90.5	89.8	3405.9	1540.6

identify areas which should receive emphasis in the allocation process.

Certain limiting factors must be considered in the allocation of new dwelling units throughout the planning area. The areas which are not served by water and sewer facilities and cannot be expected to obtain this service within a reasonable amount of time have less emphasis given to them as areas of future residential growth.

The general easterly growth of Goldsboro and the favorable conditions for additional growth in that direction led to the majority of new dwelling units being allocated to this section of the city. The existing trends in this area also conditioned a lower density for dwelling units than in other sections of the planning area. The planning districts which are expected to have a substantial increase in their residential acreage are: Number 6 to increase from an existing 244 acres to 392 acres or an increase of 148 acres; Number 9 to increase from 23 acres to 182 acres for an addition of 159 acres; Number 10 to expand by 199 acres from 26 acres to 225 acres, and; Number 13 to increase from 2 acres to 142 acres for an increase of 140 acres.

Table 8 summarizes an approximate distribution of the 1980 planning area population by planning districts. This table indicates the existing dwelling units and population as well as the estimated new dwelling units and population.

TABLE 8

APPROXIMATE DISTRIBUTION OF PLANNING AREA POPULATION BY PLANNING DISTRICTS - 1980, GOLDSBORO, N. C.

Planning District	C u r r e n t			B y E n d O f P l a n n i n g P e r i o d				Population
	Population	D.U.s	H*hold Size	Exist. D.U.s Remain.*	D.U.s Added	Total D.U.s	H*hold Size	
1	3230	868		764	467	1231		4461
2	1280	345		305	229	534		1933
3	1600	434		358	71	429		1551
4	3500	948		836	615	1451		5257
5	3660	984		942	223	1165		4220
6	7200	1935		1805	1046	2851		10335
7	2780	746		733	404	1137		4110
8	4050	1087		1066	321	1387		5023
City Subtotal	27,300	7347	3.72	6809	3376	10185	3.62	36894
9	210	70		65	572	637		1940
10	260	87		82	719	801		2440
11	860	288		281	380	661		2019
12	555	185		181	129	310		945
13	30	10		9	508	517		1576
14	130	43		35	255	290		885
15	585	195		174	364	538		1639
16	650	219		213	122	335		1020
17	145	49		46	287	333		1014
18	315	105		101	158	259		790
19	575	191		186	67	253		772
20	125	42		32	75	107		326
21	1760	591		575	226	801		2440
Fringe Subtotal	6200	2075	3.0	1980	3862	5842	3.05	17806
Planning Area Total	33500	9422	3.56	8789	7238	16027	3.41	54700

*From Table 5.

LOCAL BUSINESS

Location Standards

Local business, as termed in this study, describes commercial facilities primarily oriented to serve a residential area approximately one mile in diameter. These facilities supply daily consumer needs as contrasted with the previously defined regional businesses which generally supply more expensive and long-lived goods and services.

Goldsboro's existing local-serving businesses are scattered throughout the city. This is undesirable from several points of view. Businesses interspersed with houses decrease the utility of both. The desirability for residential use is somewhat lowered, the efficiency of the businesses is decreased, the resulting traffic congestion on some streets decreases their carrying capacity and the pedestrian shopper is forced to walk farther to patronize the various stores.

Consolidation of the scattered shopping facilities which serve a particular area into one shopping center to serve the same area would be the more efficient arrangement. These shopping areas would not necessarily be under one ownership as are most regional shopping centers, but could be either a cooperative project or on an individual basis with controls to insure harmonious appearance and function.

The location of this type business center must be considered with several elements in mind. The service area must be large enough to support the businesses yet not so large that the customer's convenience is sacrificed. The location should be adjacent to a major thoroughfare, or more ideally, at the intersection of major thoroughfares. However,

the design of the entrance and exit points should be so contrived that neither the efficiency of the intersection nor the streets would be lessened. The possibility of a natural buffer zone between the business use and adjacent uses should be considered in location so that both uses would be protected.

Space Requirements

A rule of thumb method is used to estimate the future space requirements for local-serving business. This method relies on empirically developed standards used in other cities. These standards specify a range of .65 to 1.0 acres of local-serving business land per 1000 population. In 1958 Goldsboro had approximately .95 acres of neighborhood shopping facilities per 1000 population. This falls within the range given above. A standard of 1.0 acres per 1000 population was selected as the space allocation for Goldsboro's local business. This gives a slightly higher ratio of business area to population than now exists but would provide space for adequate parking and service facilities.

Use of the above standard gives an estimated total of 55 acres in local business use by 1980. This is a 23 acre increase from the 32 acres presently in neighborhood shopping facilities.

SCHOOLS

A major determinant of the location and number of school children is the residential density pattern in the city. Therefore, the pattern reflected by the Land Use Plan and ultimately controlled by zoning regulations will tend to govern the number of school sites and their location in a future school system. The location of schools affects the road system of the city by creating additional traffic in their vicinity. They will also have an effect on the relative desirability of different residential sections. Because of these interlocking factors, continued cooperation between the city and school planning agencies is a necessity. In recognition of this necessity, before developing the standards that follow, the planners sought the help of the Superintendent of Schools and discussed with him the school needs and policies for Goldsboro. While these standards have not been endorsed by the school board, it is believed that they are compatible with their policies and practices.

Location Standards

1. Sites selected should be so located that they will fit into a logical pattern with the school sites that may be needed in later years. In other words, a school site may serve, in the beginning, an area that may require two or three schools when the section is largely built up. However, it should be so located that the other school sites, when needed, will serve logical districts that do not overlap seriously.
2. Sites should be well located and of sufficient size to accommodate the total potential school population of the area they may ultimately be called upon to serve.

3. Sites should be of adequate size and dimension to permit the retention or provision of landscaping between school and playground areas and the adjacent residences.

4. Schools should be located, as far as possible, within walking distance of their entire service area. For elementary schools the children should not have to walk over one-half mile to school. Junior high and senior high schools will of necessity have a larger service area because of the greater number of students attending these institutions.

Sites for schools and adjacent playground areas should be acquired before residential development takes place or, at least, concurrently with this development. Early action means a saving in cost of acquiring areas. As land gets scarce, land acquisition becomes more difficult and expensive. In addition, the best sites for schools may be pre-empted by other uses.

Space Standards

The general space standards for school planning are shown in Table 9. It was assumed that there would be a maximum of 30 pupils per classroom in elementary schools and 25 pupils per classroom in the junior and senior high schools. The recommended site size for elementary schools is 5 acres plus 1 acre for every 100 pupils. An elementary school at the optimum size of 400 pupils would require a 9 acre site. The same technique is applied to the junior and senior high schools except that they have a minimum site size of 10 and 15 acres respectively. A 550 pupil junior high school needs a 15 - 16 acre site while a 750 pupil senior high school would require a 22 - 23 acre site. The increased site sizes for

TABLE 9

GENERAL STANDARDS FOR SCHOOL PLANNING

A. SERVICE AREA	(Miles) One-Way Walking Distance		(Minutes) Travel Time	
	<u>Optimum</u>	<u>Maximum</u>	<u>Optimum</u>	<u>Maximum</u>
Elementary	1/2	3/4	20	30
Junior High	1	1-1/2	25	45
Senior High	1-1/2	2	30	60

B. ENROLLMENT	<u>Minimum</u>	<u>Optimum</u>	<u>Maximum</u>
Elementary	180	400	600
Junior High	300	550	800
Senior High	300	750	1200

C. SITE SIZE	<u>Minimum</u>	<u>Recommended</u>
Elementary	2 acres plus 0.7 acre per 100 pupils	5 acres plus 1 acre per 100 pupils
Junior High	2 acres plus 0.94 acre per 100 pupils	10 acres plus 1 acre per 100 pupils
Senior High	5 acres plus 1.15 acres per 100 pupils	15 acres plus 1 acre per 100 pupils

D. PUPILS PER CLASS	
Elementary	30
Junior High	25
Senior High	25

the secondary schools are to provide for more recreation space as well as the additional space required by the larger school buildings.

Space Requirements

The first step in deriving school space requirements is an estimate of school enrollments for 1980. The present school enrollments are presented in Table 10. The existing ratios of elementary, junior high and senior high school enrollments, white and Negro, to the total urban area population of 35,500 are given below.

STUDENTS PER 100 POPULATION - 1960

	<u>White*</u>	<u>Negro*</u>
Elementary 1-6	6.4	5.7
Junior High 7-9	3.1	2.1
Senior High 10-12	2.5	1.7

*Adjusted to a 6-3-3 grade organization.

Detailed methods are available by which age groups in the population may be projected to 1980. This could be applied to school age children in the above system. However, recognizing the scope of this study, it is believed adequate to assume that the ratios listed above will apply to the school population composition in 1980.

Applying the 1960 ratios to the estimated 1980 urban area population of 54,700, the projected enrollment breakdown is as follows:

ESTIMATED SCHOOL ENROLLMENT - 1980

	<u>White</u>	<u>Negro</u>
Elementary	3500	3130
Junior High	1700	1160
Senior High	1360	930
Total	6560	5220
Total 1980 School Enrollment: 11,780		

The previously noted school space standards have been applied to the estimated school enrollments to determine the area required for school purposes. The method used to derive the school areas may be followed through on Table 10. The total estimated school enrollment of 11,780 by 1980 will require about 256 acres of land. This represents an increase of 4,150 pupils and 150 acres above the existing enrollment of 7,600 and area of 106 acres used for school purposes. Two new white elementary, one new white junior high, two new Negro elementary and one new Negro junior high school have been proposed by 1980 as well as additions to certain other existing school facilities. A detailed summary is presented in Table 10.

TABLE 10

SCHOOL REQUIREMENTS OF GOLDSBORO, 1980

S C H O O L S	E X I S T I N G					P R O P O S E D				
	Enroll- ment	Pupils per Class	Site Size (Acres)	Class- rooms	Grade Organi- zation	Enroll- ment	Pupils per Class	Desirable Site Size (Acres)	Class- rooms	Grade Organi- zation
W H I T E ELEMENTARY (Total)	2276	29	28.5	19	1 - 4	3500	28	62	19	1 - 6
	544	22	3	12	1 - 4	532	30	10	12	1 - 6
	262	24	7.5	15	1 - 4	360	30	8	15	1 - 6
	359	33	10	34	1 - 6	450	30	9	34	1 - 6
	1111	.....	.....	.....	.....	1020	30	15	1020	1 - 6
	.....	.....	.....	.....	.....	569	30	10	19	1 - 6
	.....	.....	.....	.....	.....	569	30	10	19	1 - 6
	1104	34	17.2	33	7 - 9	1700	25	36	33	7 - 9
	1104	.....	.....	.....	.....	825	25	18	35	7 - 9
	.....	.....	.....	.....	.....	875	25	18	.....	.....
SENIOR HIGH (Tot.)	873	21	18	41	10 - 12	1360	25	43	41	10 - 12
	873	.....	.....	.....	.....	1025	25	28	14	10 - 12
	.....	.....	.....	.....	.....	335	25	15	.....	.....
	4273	.....	63.7	.....	.....	6560	.....	141	.....	.....
T O T A L NON - W H I T E ELEMENTARY (Total)	2015	30	20	32	1 - 6	3130	30	55	32	1 - 6
	969	27	7	19	1 - 6	969	30	15	19	1 - 6
	520	31	6	17	1 - 6	570	30	10	17	1 - 6
	526	.....	.....	.....	.....	510	30	10	18	1 - 6
	.....	.....	.....	.....	.....	541	30	10	18	1 - 6
	.....	.....	.....	.....	.....	540	30	10	18	1 - 6
	555	29	7	19	7 - 8	1160	25	31	19	7 - 9
	555	.....	.....	.....	.....	475	25	15	27	7 - 9
	.....	.....	.....	.....	.....	685	25	16	.....	.....
	811	32	15	26	9 - 12	930	25	29	37	10 - 12
T O T A L NON-WHITE	811	.....	.....	.....	.....	930	.....	.....	.....	.....
	3381	.....	42	.....	.....	5220	.....	115	.....	.....
G R A N D T O T.	7634	.....	105.7	.....	.....	11780	.....	256.0	.....	.....

PARKS AND RECREATION

When Goldsboro was a smaller city it was closely tied to the rural life, physically as well as economically. The city residents did not have far to go to enjoy the amenities of the open countryside. As the saying goes, there was "all outdoors" in which to play. Yet, as the city has grown and subdivision after subdivision has been built around it, this close-in open land has been vanishing.

As Goldsboro becomes more extensively developed over the years, the need for parks will become more crucial. Additional population will require more land for recreation purposes, while this same increase in population will mean less land available for such use. For example, the vacant lots and open lands which now serve as play lots for children living in nearby houses will be built upon. Playing on the streets of the city is undesirable from the standpoint of safety, and this will become a more acute problem as the traffic on the streets increases with the growth of population. With the increased pressure of modern life and the increased amount of leisure time, the demand for and opportunity to take part in recreational activity has correspondingly increased.

Location Standards

Park and recreation facilities require diverse sites, in size and type of topography, depending on their function. Recreation areas may be classified as either "active" or "passive" in character. Active areas are those which have playground equipment, playfields, community centers and similar facilities for organized recreation. Passive areas are less highly developed which provide a more natural atmosphere for

informal recreation activities such as picnicking, hiking and just enjoying nature.

Active areas require reasonably level land for field sports and equipment. These are generally in conjunction with school facilities. Passive areas can utilize steep land and that which is adjacent to watercourses. All recreation areas require a service area which is related to their function. Playgrounds, for example, need to be in easy walking distance of the age group served. More specialized recreation facilities such as golf courses need only to be located within easy motoring distance.

Drainage corridors are particularly suitable for recreational purposes for several reasons. They are generally the more scenic areas with interesting topography, natural plants and water. Land along these corridors often is not suitable for building because of periodic flooding and steep topography. Development of drainage corridors as park land will also facilitate their use as utility routes which are more simple to maintain than utility lines along streets. A policy to purchase certain strategic areas along drainage corridors and to obtain easements along the remainder should be studied more thoroughly.

Space Requirements

The National Recreation Association has set a standard of one acre of recreation land for each 100 people. This standard represents all public open space including school playgrounds, playfields, parks, golf courses, and other recreation facilities. Individual recreation standards used in this study are presented on Table 11.

Space needs for Goldsboro's recreation program are estimated for 1980 by applying these standards to the estimated urban area population of 54,700. The overall standard would require 547 acres of recreation areas. This may be unrealistic considering that Goldsboro is now considerably under the recommended standard to serve an urban area population of 35,500. There are 150 acres now in recreational use which is 205 acres below the recommended 355 acres to serve the present population. However, an active, continuing recreation program could work toward acquiring this deficit in park land as well as providing the additional acreage required to serve the 1980 urban area population. In addition, the existing deficit in recreation land may be somewhat overstated since recreation areas at schools have not been counted in the park land. If the playgrounds and playfields at the various schools are available for general use they would help to make up some of the deficit in park land now existing.

Table 12 indicates the acreage needed for the various types of recreation facilities derived from the application of the general recreation standards listed on Table 11.

TABLE 11

GENERAL RECREATION STANDARDS

FACILITY	STANDARD	SITE SIZE	SERVICE AREA
NEIGHBORHOOD FACILITIES			
Playgrounds	1 acre/800 people	3-6 acres	3/8-1/2 mile
Local Parks	1 acre/1,000 people	2 acres or more	3/8-1/2 mile
Playfields	1 acre/800 people	10-30 acres	1/2-1 mile
Softball diamonds	1 each/3,000 people	---	---
Baseball diamonds	1 each/6,000 people	---	---
Tennis Courts	1 each/2,000 people	---	---
CITY-WIDE FACILITIES			
Recreation Centers	1 each/20,000 people	---	---
Swimming Pool	1 each/25,000 people	---	---
Public Golf Courses	1 hole/3,000 people	100 acres/18 holes	---
Natural Parks	1 each/40,000 people	100 acres	---
ALL RECREATION NEEDS	1 acre/100 people	---	---

TABLE 12

RECREATION REQUIREMENTS - GOLDSBORO, 1980

<u>Recreation Facilities</u>	<u>Area in Acres</u>
NEIGHBORHOOD FACILITIES	
Playgrounds	70
Local Parks	55
Playfields	70
URBAN-WIDE FACILITIES	
Public Golf Course	100
Natural Parks	150
Special Facilities (Swimming Pools, Recreation Centers, Zoo, Municipal Stadium, Etc.)	<u>102</u>
Total	547*

*Using the standard of one acre per 100 persons for total recreation needs as recommended by the National Recreation Association.

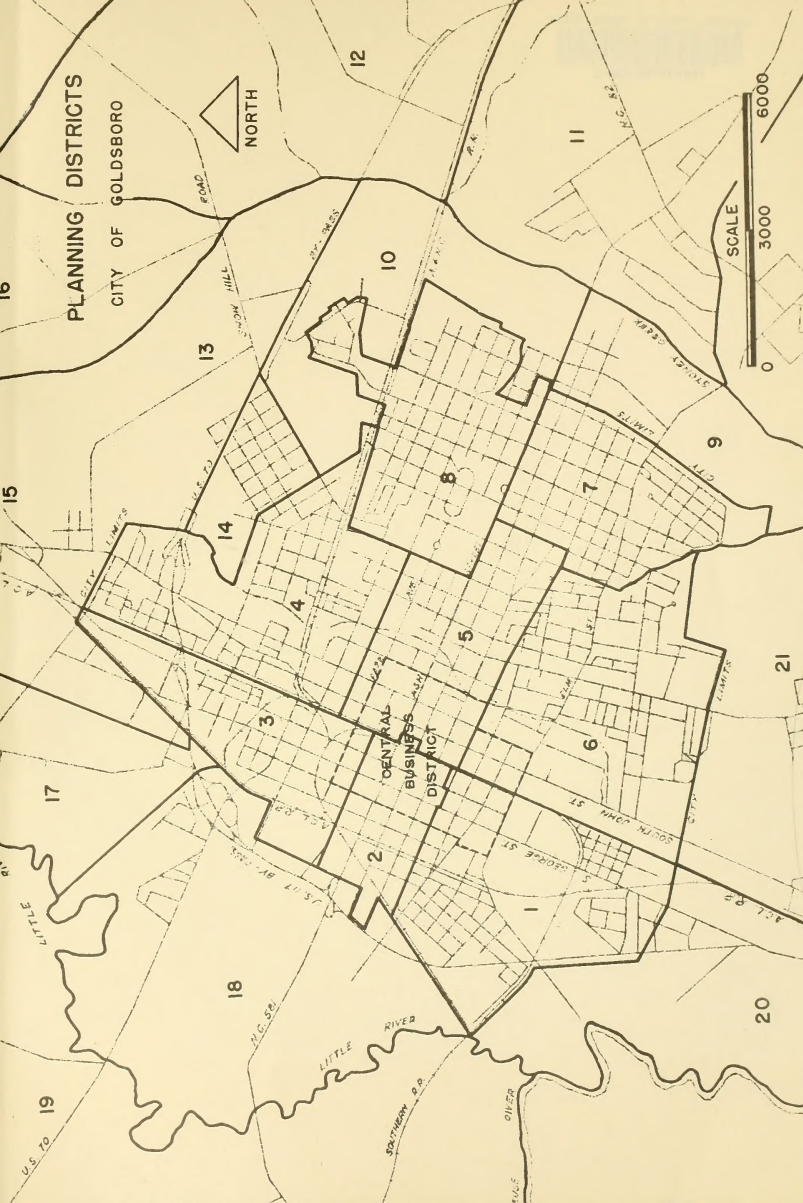
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